

## Abstract

A method and apparatus for reducing the cost of an RF base station that services a location where real estate is expensive without reducing the capacity of the system, subjecting the system to significant environmental interference, or purchasing additional licensed frequency spectrum. In accordance with the present invention, communication between two sections of an RF base station of a wireless communication system is implemented using an over-the-air optical link, also referred to as a wireless optical link. In particular, wireless RF communication equipment of either, or both, 1) the RF antenna and RF hardware, and 2) the processing and/or control section of the RF base station is coupled to over-the-air optical communication equipment. Overall, the present invention allows an RF base station to service the location where real estate is expensive at a much lower cost without reducing the capacity or the signal quality of the system.